

What is claimed is:

1. A substantially purified human regulatory protein (NHRP) selected from the group consisting of: SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, and SEQ ID NO:37.

2. An isolated and purified polynucleotide sequence encoding the human regulatory protein of claim 1.

3. A polynucleotide sequence which hybridizes under stringent conditions to the polynucleotide sequence of claim 2.

4. A composition comprising the polynucleotide sequence of claim 2.

5. An isolated and purified polynucleotide sequence selected from the group consisting of: SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, and SEQ ID NO:74.

6. A microarray comprising one or more oligonucleotides derived from at least one of the polynucleotide sequences selected from the groups consisting of SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71,

SEQ ID NO:72, SEQ ID NO:73, and SEQ ID NO:74.

7. A polynucleotide sequence which is complementary to the polynucleotide sequence of claim 6.

8. A composition comprising the polynucleotide sequence of claim 7.

5 9. An expression vector containing the polynucleotide sequence of claim 2.

10. A host cell containing the vector of claim 9.

11. A method for producing a polypeptide encoding a human regulatory protein, the method comprising the steps of:

10 a) culturing the host cell of claim 10 under conditions suitable for the expression of the polypeptide; and

b) recovering the polypeptide from the host cell culture.

12. A pharmaceutical composition comprising a substantially purified human regulatory protein of claim 1 in conjunction with a suitable pharmaceutical carrier.

15 13. A purified antibody which binds specifically to the human regulatory protein of claim 1.

14. A purified agonist which modulates the activity of the human regulatory protein of claim 1.

15. A purified antagonist which decreases the effect of the human regulatory protein of claim 1.

20 16. A method for stimulating cell proliferation comprising administering to a cell an effective amount of the NHRP of claim 1.

17. A method for treating a cancer comprising administering to a subject in need of such treatment an effective amount of the pharmaceutical composition of claim 12.

25 18. A method for treating a cancer comprising administering to a subject in need of such treatment an effective amount of the antagonist of claim 15.

19. A method for treating an immune response comprising administering to a subject in need of such treatment an effective amount of the antagonist of claim 15.

20. A method for detecting a polynucleotide which encodes a human regulatory protein in a biological sample comprising the steps of:

30 a) hybridizing the polynucleotide of claim 7 to nucleic acid material of a

biological sample, thereby forming a hybridization complex; and

b) detecting said hybridization complex, wherein the presence of said complex correlates with the presence of a polynucleotide encoding a human regulatory protein in the biological sample.

5 21. A method for the simultaneous detection of levels of expression of polynucleotides which encode human regulatory proteins in a biological sample comprising the steps of:

a) hybridizing the microarray of claim 6 to labeled complementary nucleotides of a biological sample, thereby forming hybridization complexes; and

10 b) quantifying expression, wherein the signal produced by the hybridization complexes correlates with expression of particular polynucleotides encoding human regulatory proteins in the biological sample.

22. The method of claim 21, wherein before hybridization, the nucleic acid material of the biological sample is amplified and labeled by the polymerase chain reaction.

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ADD  
A1  
add B71  
add C42